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Attorney Docket 920476-904811

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TO: **Commissioner for Patents**

EXAMINER: **Shi K. Li**

GROUP ART UNIT: **2633**

Attached: **Supplemental Reply Brief In Response to Substitute Examiner's Answer Mailed January 12, 2006**

If you do not receive all pages, please contact William M. Lee, Jr. at (312) 214-4800 or his assistant, Minnie Wilson at (312) 214-4829.

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I hereby certify that this paper for Application Serial Number 09/584,330 is being transmitted via fax to the Patent and Trademark Office, (571) 273-8300 on the date shown below.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of	:	Brian Unitt et al
Serial No.	:	09/584,330
Filed	:	May 30, 2000
For	:	High Capacity Passive Optical Network
Examiner	:	Shi K Li
Art Unit	:	2633
Customer number	:	23644

I hereby certify that this correspondence is being transmitted to the above – identified examiner at the United States Patent and Trademark Office (571) 273-8300 on January 19, 2006.
Name of person signing Minnie Wilson
Signature Minnie Wilson

SUPPLEMENTAL REPY BRIEF IN RESPONSE TO SUBSTITUTE EXAMINER'S ANSWER MAILED JANUARY 12, 2006

Honorable Director of Patents and Trademarks
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

The Examiner argues on page 7 of the Examiner's Answer that:
"nowhere does Darcie teach "it is a mandatory requirement that each end user station receives back the data it transmits upstream". This is only Appellant's conclusion or opinion which cannot take the place of evidence".

However, Appellant's statement was that "in this PON related embodiment of Darcie, it is a mandatory requirement that each end user station receives back the data it transmits upstream (i.e. towards the head end station) as a traffic information

signal (TIS)." This is not a conclusion or opinion but is fairly based on the description of Darcie at column 17, lines 11 to 16 and lines 22 to 31:

> "alternatively, to maintain the passive nature of the PON, another approach is to use different wavelengths or different sub-carriers for upstream and downstream transmission and passively loop back upstream signals for traffic indication purposes".
>
> "... if upstream and downstream transmission use different wavelengths, the upstream light is collected over the unused trunk port of the optical splitter 150 or 150b, coupled to the downstream trunk port 151 or the unused trunk port of the other splitter 150a and broadcast downstream. Therefore, the EU [end user] will receive downstream data on one wavelength and the TIS [traffic information signal] on the other wavelength, which is the same as that of upstream. EU 20 could compare the received TIS, which is the upstream data, with its transmitted data to monitor the traffic condition".

At page 8 the Examiner argues that:

> "Darcie does not criticize, discredit or otherwise discourage solution claimed in application. On the contrary, Darcie realizes that it is unnecessary for a node to receive back information that it has sent. ... Since Darcie does not criticize, discredit or otherwise discourage solution claims in application, D'Arcie does not teach away from the claimed invention".

However, every embodiment of Darcie requires that a traffic information signal (TIS) is transmitted back to the end stations. Without this, the collision detection mechanism of Darcie would not work. In the only PON related embodiment of Darcie, the TIS signal is in fact the upstream signal transmitted by an end station which is passively looped back to the end station for traffic indication purposes and

so as to maintain the passive nature of the PON (see above quotation from Darcie). In stark contrast, the presently claimed invention requires there to be no optical connectivity from the subscriber stations back to themselves. It is in this respect that the PON related embodiment of Darcie clearly teaches away from the present invention. (Please note there is a typographical error in Appellant's Appeal Brief on page 5, lines 3 to 5, which describes the prior art document Darcie. The sentence spanning lines 3 to 5 should read "Intermediate nodes receive upstream signals from end users, derive traffic information signals from the upstream signals, and transmit the traffic information signals ~~from~~ to end users").

Also on page 8 of the Examiner's Answer, the Examiner argues that:

> "the appellant then attacks Darcie by saying "[Darcie] does not address the problem of economy and efficiency in implementing collision detection mechanism in a PON". This is irrelevant since such terminologies are not supported by the claims".

However, the claims clearly relate to a passive optical network arrangement and to implementing collision detection mechanisms. Appellant does not consider that statements of the problem addressed by the invention (i.e. economy and efficiency) need to be recited in the claims, and courts have consistently ruled that such statements are superfluous and are not given patentable weight.

On page 9 of the Examiner's Answer, the Examiner reiterates his argument that there is a motivation to combine the three references cited against the main claims. However, the Examiner has not addressed appellant's arguments as set out in the Appeal Brief. Appellant respectfully requests that the Appeal Board consider these arguments, which refute the Examiner's position.

Reversal of the Examiner is again urged.

January 18, 2006

Respectfully submitted,

William M. Lee, Jr.
Registration No. 26,935
Barnes & Thornburg LLP
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4800
(312) 759-5646 (fax)

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